

Title (en)

COMPOSITION FOR POLYURETHANE ELASTOMER HAVING HIGH HARDNESS AND EXCELLENT ABRASION RESISTANCE

Title (de)

ZUSAMMENSETZUNG FÜR POLYURETHANELASTOMER MIT HOHER HÄRTE UND HERVORRAGENDER ABRIEBFESTIGKEIT

Title (fr)

COMPOSITION POUR ELASTOMERE POLYURETHANNE A DURETE ELEVEE ET A EXCELLENTE RESISTANCE A L'ABRASION

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Application

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Abstract (en)

[origin: WO03066703A1] A composition is provided for preparing a polyurethane elastomer, which is of high hardness and excellent abrasion resistance. The composition comprises a urethane prepolymer with an unreacted isocyanate content of 5-22% by weight, made from the reaction of a mixture of an aromatic diisocyanate and a cycloaliphatic diisocyanate in weight proportions of 1: 0.1 to 1: 5 with a polyol having a weight average molecular weight of 200-3,000; and a curing system comprising a mixture of an aromatic amine and an alcohol in weight proportions of 1: 0.3 to 1: 3, said alcohol comprising a multifunctional alcohol and a polyol, wherein, when the equivalent ratio between the prepolymer and the curing system is set as 100 in terms of index, they are mixed in the index range of about 70 to 200. The prepolymer is suitably controlled in viscosity and reactivity as to provide effective workability. Also, a curing system improves the hardness and abrasion resistance properties of finally produced polyurethane elastomers and allows the reactivity with prepolymer to be controlled with higher ease than dose a curing system composed of an aromatic amine alone.

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